MESA SAGEBRUSH FERTILZATION PROJECTS

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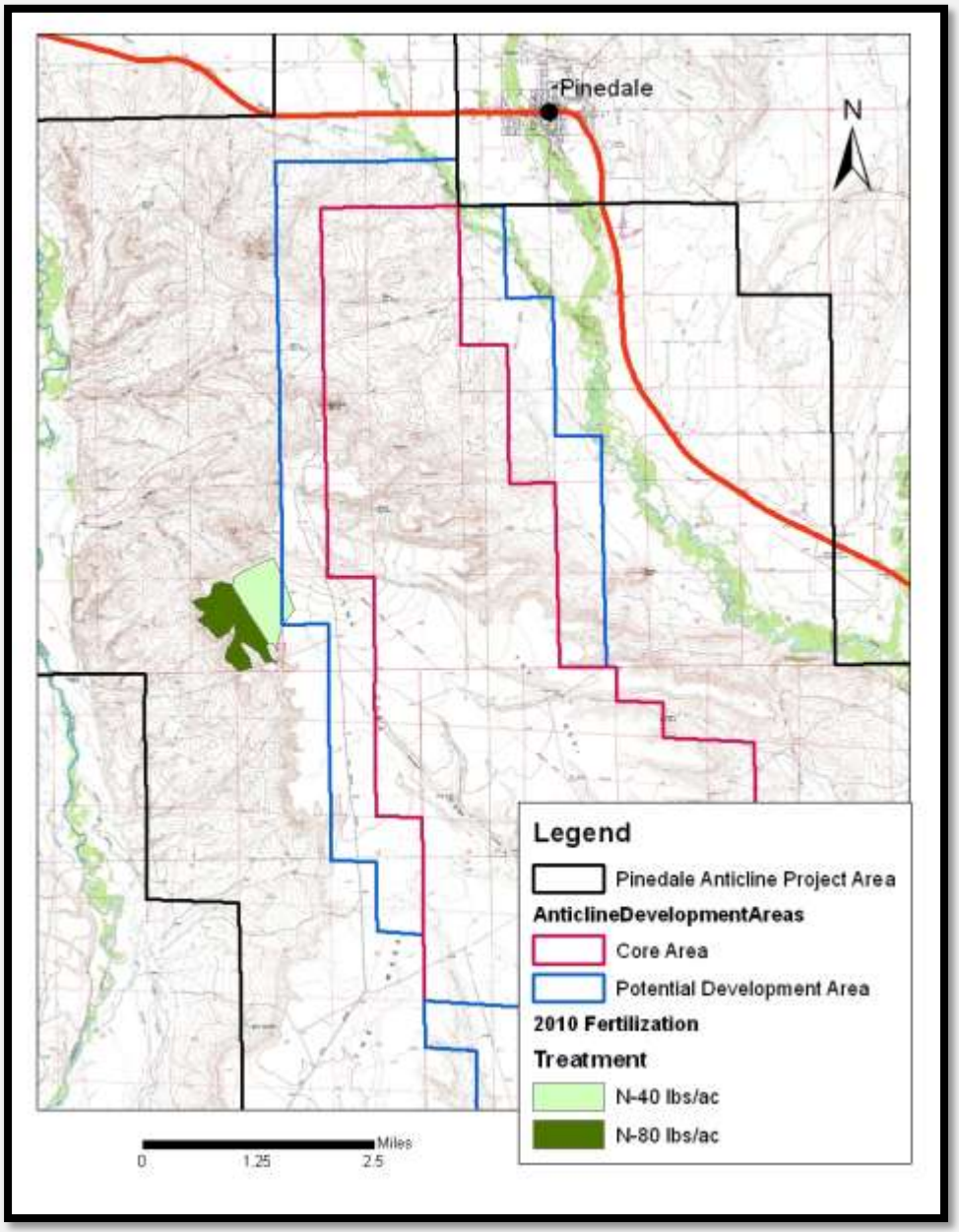
2010 Fertilization Project

- In 2009 WGFD proposed sagebrush fertilization trial in crucial mule deer winter range on the Mesa
- Goals of project were to
  - Increase sagebrush production (leader growth)
  - Potentially increase nutrient quality and palatability
- PAPO funded project: total $46,000
- Project on BLM land so NEPA was completed
- In fall 2010, 468 acres of sagebrush was fertilized
- 228 acres treated with 40 lbs Nitrogen/acre
- 240 acres treated with 80 lbs Nitrogen/acre

2010 Fertilization Project



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2010 Fertilization Project

Annual Monitoring of this project includes:

- Herbaceous Production (grasses and forbs)
- Shrub Production (annual leader growth)
- Sagebrush Nutrient Sampling

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Monitoring Results
Herbaceous Production

YEAR		CONTROL	40 lbs./N/acre Site	80 lbs./N/acre Site
2010 (pre)	Grass	269 lbs./acre	198 lbs./acre	168 lbs./acre
2011 (post)	Grass	237 lbs./acre	250 lbs./acre	240 lbs./acre
2010 (pre)	Forbs	112 lbs./acre	44 lbs./acre	54 lbs./acre
2011 (post)	Forbs	124 lbs./acre	54 lbs./acre	86 lbs./acre

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Monitoring Results

Shrub Production (Average Leader Length)

YEAR	CONTROL	40 lbs./N/acre Site	80 lbs./N/acre Site
2010 (pre)	2 mm (0.08 inches)	4 mm (0.16 inches)	3 mm (0.12 inches)
2011 (post)	20 mm (0.79 inches)	49 mm (1.93 inches)	35 mm (1.34 inches)

Monitoring Results
Sagebrush Nutrient Sampling

- First nutrient samples will be taken in fall 2011 to measure nutrient content of sagebrush going into the winter

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2011 Mesa Fertilization Project

- WGFD propose fertilizing 30,598 acres of sagebrush in CWR
- Operators offered additional 2,100 acres of lease suspension
- PAPO board approved funding for fertilization of up to 3,000 acres of sagebrush habitat: Total $215,700
- NEPA was conducted by BLM with several comments received.
- 3 Alternatives were analyzed:
  - No action
  - Alternative 1 (3,000 acres)
  - Alternative 2 (30,598 acres)

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2011 Mesa Fertilization Project

Decision Record selected a modified Alternative 2:

- 1,000 acre treatment was approved for 2011
- 2,000 acre treatment was approved contingent on results of the 1,000 acre treatment and the previous 468 acre trial treatment

2011 Mesa Fertilization Project

Future fertilization treatments within the 30,598 acre delineated project area may occur subject to:

- Funding approval
- Achievement of all project goals and objectives and avoidance of negative impacts
- At least two years of monitoring data collected
- Public notification one year prior to implementation of each additional treatment
- Priority for additional treatments given to areas under lease suspension, unavailable for leasing, or agreement with leaseholder to be deferred from development for a minimum of three years following treatment

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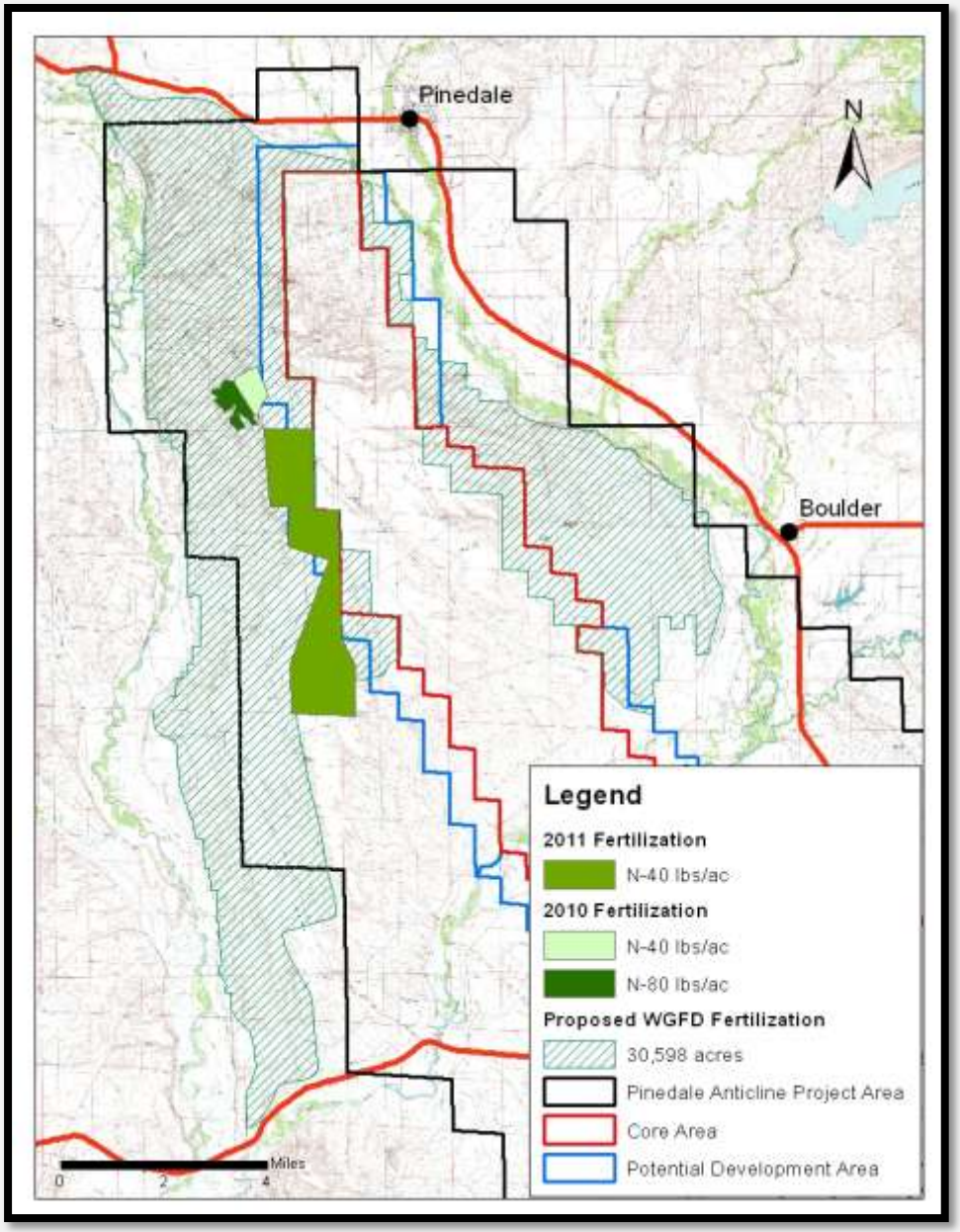
2011 Mesa Fertilization Project



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2011 Mesa Fertilization Project

- 1,000 acres to be treated late fall 2011
- 40 lbs. (or less) Nitrogen/acre

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2011 Fertilization Project

Annual Monitoring of this project includes:

- Herbaceous Production (grasses and forbs)
- Shrub Production (annual leader growth)
- Sagebrush Nutrient Sampling

New Monitoring Components Added

- Canopy and Ground Cover (%)
- Precipitation (rain gauges)

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Future Fertilization Projects

- Depending on future monitoring results, remaining 2,000 acres may be treated in late fall 2012
- Additional fertilization treatments may be implemented within the 30,598 acre project area depending on results of 2010, 2011 and potentially the 2012 treatments